

Alcimedea

A recent study (*Med Sci Law* 2008;**48**:137–41) has looked at the physiological effects of restraint positions as a small but significant number of people die during restraint following violent incidents. Participants restrained flat on the floor, prone or supine showed non-significant reductions in forced vital capacity (FVC) and forced expiratory volume (FEV1) compared with the standing control position. Participants restrained face down with the body weight of the restraining person pressed on their upper torso and/or in a flexed restraint position showed a significant reduction in lung function (mean reduction in FVC and FEV1 of 23.8% and 27.4%, respectively). Recommendations that all restraint positions pose equal risk or that all prone restraint is dangerous are not supported by the findings. However, laboratory studies must eliminate certain hazards such as obesity, intoxication with drugs and significant health problems. Staff training should focus on reducing any restriction of the patient's thorax.

Cannabis and driving continues to be a topical and important issue as cannabis ranks second to alcohol as the psychoactive substance used most frequently in many western countries. A recent paper (*Addiction* 2008;**103**:452–61) has looked at the concentration of THC in the blood of individuals apprehended for driving under the influence of drugs (DUID) in Sweden where a 'zero-tolerance law' operates. The limit of quantitation (LOQ) for analysis of THC in blood in the researcher's laboratory is 0.3 ng/ml, and this serves as the threshold for prosecution. The study concludes that the concentration of THC in the blood at the time of driving is probably a great deal higher than at the time of sampling (30–90 min) later. The notion of enacting science-based concentration limits of THC in blood e.g. 3–5 ng/ml would result in many individuals evading prosecution. They go on to recommend that zero-tolerance or limit of quantitation laws are a much more pragmatic way to enforce the DUID legislation. This sends a clear message to those who use illicit drugs such as cannabis. The risk of reaching measurable amounts of THC in blood after passive inhalation is virtually non-existent.

Recreational usage of ketamine is increasing and with it urinary symptoms and associated urinary tract disease.

Typically, urinary symptoms appear to reverse with cessation of ketamine use but acute renal failure, renal papillary necrosis and ureteric obstruction have been reported (*BMJ* 2008;**336**:973).

The Independent Police Complaints Commission has recently published a report *Near Misses in Police Custody* (IPCC, 2008). A 'near miss' was defined as "any incident which resulted in, or could have resulted in, the serious illness or self-harm of a detainee". Forensic physicians in London reported 121 incidents over a 12 month period. The most common incidents involved attempted suicide/self-harm (46%), consumption or possession of drugs (33%); alcohol consumption (7%); and medical conditions (14%). The report made a number of recommendations including the need for training of custody staff and forensic physicians in dealing with vulnerable detainees and the importance of ongoing reporting of 'near-miss' incidents and their successful interventions.

The Police Ombudsman of Northern Ireland became the statutory authority charged with the responsibility of investigating complaints made against the police of NI in 2001. A recent paper (*Med Sci Law* 2008;**48**:117–23) has reported that forensic physicians feel their expertise was a resource under-used by the police ombudsman in the investigation of allegations of misconduct against the police officers whilst on duty. Their independence in examining and assessing allegations of assault by police could be better utilised.

An unusual case of a fabricated sexual assault is reported in *For Sci Int* (2008;**177**:e29–33). It involved a 28-year-old woman who was found tied in her flat by her son who called the police. When the police arrived, the woman was lying on the floor fully conscious. Her face and upper chest, arms and legs were wrapped with broad adhesive tape in such a way that a small mouth hole had been left for her to breathe through and she was able to free her arms without assistance. After the police had cut the tapes, the woman stated that she had been attacked by two men who demanded a large amount of money and made her unconscious by pressing a strange smelling cloth

against her mouth. During the course of a subsequent gynaecological examination, several teaspoons and pieces of jewellery were found in her vagina. Neither the genital region nor the other parts of her body showed any injuries. When the woman was confronted with the discrepancies between her story and the actual medical findings, she admitted self-infliction for the purpose of simulating an offence. It appears that she had lost a lot of money gambling and hoped to deflect attention from this by feigning an assault and burglary.

It has long been recognised that women tend to eliminate alcohol at a faster rate than men. A study that set out to investigate the influence of sex hormones (estradiol, progesterone and testosterone) on the elimination kinetics of ethanol discovered that the alcohol was eliminated faster in a subgroup of women with high progesterone levels (*For Sci Int* 2008;85–9). The authors conclude that the gender differences in the pharmacokinetics of ethanol can partly, but not completely, be explained by progesterone levels.